

## REMARKS

In the Final Office Action mailed April 23, 2008, the Office took the following action: (1) rejected claims 1-4, and 6-13 under 35 U.S.C. §103(a) as being unpatentable over Yokel (U.S. Patent No. 3,803,934 'Yokel') in view of Rediker (U.S. Patent No. 5,323,665 'Rediker'); and (2) rejected claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Yokel in view of Rediker in further view of Stone et al. (U.S. Patent No. 3,942,387 'Stone'). Applicant respectfully traverses and further requests reconsideration and withdrawal of the rejections in view of the following remarks.

### ***Rejections under 35 U.S.C. §103(a)***

The Office Action rejected claims 1-4, and 6-13 under 35 U.S.C. §103(a) as being unpatentable over Yokel in view of Rediker; and rejected claim 5 under 35 U.S.C. §103(a) as being unpatentable over Yokel in view of Rediker in further view of Stone. Applicant respectfully traverses.

### **Claims 1 and 12-13**

As amended, claim 1 recites:

A gear assembly adapted to be mounted on a shaft, comprising:  
a drum having an inner cylindrical wall adapted to be mounted  
on the shaft, an outer cylindrical wall, and a drum face connected to said inner  
cylindrical wall, the drum face including a plurality of cavities;  
a gear ring mounted on and fixed to an outer circumference of  
the drum face; and  
gear teeth formed on an outer circumference of the gear ring,  
*the gear teeth formed for line contact,*  
wherein a vector normal to the gear teeth at a radial and a  
vector perpendicular to the inner cylindrical wall at the radial have an angular  
difference that is less than 30°.

(Emphasis added). Applicant respectfully submits that Yokel either singularly or in combination with Rediker, assuming *arguendo* that such combination is proper, fails to teach or suggest each recitation in claim 1, as is required by MPEP 2143 to establish a *prima facie* case of obviousness. More specifically, Applicant submits that the cited references fails to teach or suggest “the gear teeth formed for line contact” as recited in 1.

Yokel generally pertains to a “power transmission for transmitting power from an input shaft and to an output shaft which is inclined at an angle to the input shaft.” (Abstract). Specifically, the “input shaft carries a helical, tapered pinion gear while a reversing lay-shaft carries a helical cylindrical gear, both gears are in constant mesh with a larger tapered, helical gear.” (Abstract). Although Yokel teaches using helical gears (Column 2, lines 38-39), a thorough search of Yokel fails to uncover any mention of the type of contact used in the gears. Thus, Yokel fails to teach or suggest “the gear teeth formed for line contact” as recited in 1. Rediker fails to remedy the deficiencies of Yokel.

Rediker generally pertains to a “flexplate flywheel has an annular damper ring welded directly to the associated ring gear.” (Abstract). Specifically the “outer annulus 42 of the disc 41 has a radial outer edge 52 to which is welded a steel ring gear 53 with teeth 54 for engaging a starter drive gear 26.” (Column 2, lines 49-52). A thorough search of Rediker fails to uncover any mention of the type of contact used in the gears. Thus, Rediker fails to teach or suggest “the gear teeth formed for line contact” as recited in 1.

The amendments to claim 1 are supported in the specification by at least page 4, lines 23-26. No new matter has been added.

Claims 12-13 depend from independent claim 1 and are thus allowable for at least the same reasons as claim 1. Further, the additional limitations in claims 12-13 provide limitations which are not taught by the cited reference.

Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection to claims 1 and 12-13.

#### **Claims 2-6**

As amended, claim 2 recites:

A system comprising:  
a power generation system including:  
a power generation system;  
a shaft coupled to the power generation system; and  
a spur gear mounted to the shaft; and  
a receiving system including:  
a shaft; and  
a low angle face gear *comprising gears having line contact*, the  
low angle face gear mounted to the shaft of the receiving system, wherein the  
low angle face gear includes a drum having an inner cylindrical wall adapted  
to be mounted on the receiving system shaft, and a drum face connected to  
said inner cylindrical wall, the drum face having at least two cavities to reduce  
the weight of the low angle face gear,  
wherein the power generation system shaft and the receiving  
system shaft are positioned such that the spur gear drives the low angle face  
gear, and the shafts have an angular difference that is less than 30°.

(Emphasis added). Applicant respectfully submits that Yokel either singularly or in combination with Rediker, assuming *arguendo* that such combination is proper, fails to teach or suggest the recitations of claim 2 as required under 35 U.S.C. §103(a). Specifically, Yokel in view of Rediker fails to teach or suggest “a low angle face gear comprising gears having line contact” as recited in 2. Applicant incorporates the reasoning presented above in response to the rejection of claim 1. Specifically, neither Yokel nor Rediker mentions the type of contact used in the gears. Thus, Yokel in view of Rediker fails to teach or suggest “comprising gears having line contact” as recited in 2.

Claims 3-6 depend from independent claim 2 and are thus allowable for at least the same reasons as claim 2. Further, the additional limitations in claims 3-6 provide limitations which are not taught by the cited reference.

Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection to claims 2-6.

### Claims 7-11

As amended, claim 7 recites:

A system comprising:  
a first system including:  
a shaft; and  
a spur gear mounted to the shaft; and  
a second system including:  
a shaft; and  
a low angle face gear *comprising gears having line contact*, the  
low angle face gear mounted to the shaft of the receiving system, wherein the  
low angle face gear includes a shaft aperture at least partially encircled by a  
plurality of apertures, the shaft aperture to receive the second system shaft and  
the plurality of apertures to reduce the weight of the low angle face gear,  
wherein the first system shaft and the second system shaft are  
positioned such that the spur gear drives the low angle face gear, and the  
shafts have an angular difference that is less than 30°.

(Emphasis added). Applicant respectfully submits that Yokel in view of Rediker fails to teach or suggest the recitations of claim 2 as required under 35 U.S.C. §103(a). Specifically, the cited art fails to teach or suggest “a low angle face gear comprising gears having line contact” as recited in 7. Applicant incorporates the reasoning presented above in response to the rejection of claim 1. Specifically, neither Yokel nor Rediker mentions the type of contact used in the gears. Thus, Yokel in view of Rediker fails to teach or suggest “comprising gears having line contact” as recited in 7.

Claims 8-11 depend from independent claim 7 and are thus allowable for at least the same reasons as claim 7. Further, the additional limitations in claims 8-11 provide limitations which are not taught by the cited reference.

Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection to claims 7-11.


### CONCLUSION

For the foregoing reasons, Applicant respectfully submits that pending claims 1-13 are now in condition for allowance. If there are any remaining matters that may be handled by telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

Respectfully Submitted,

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